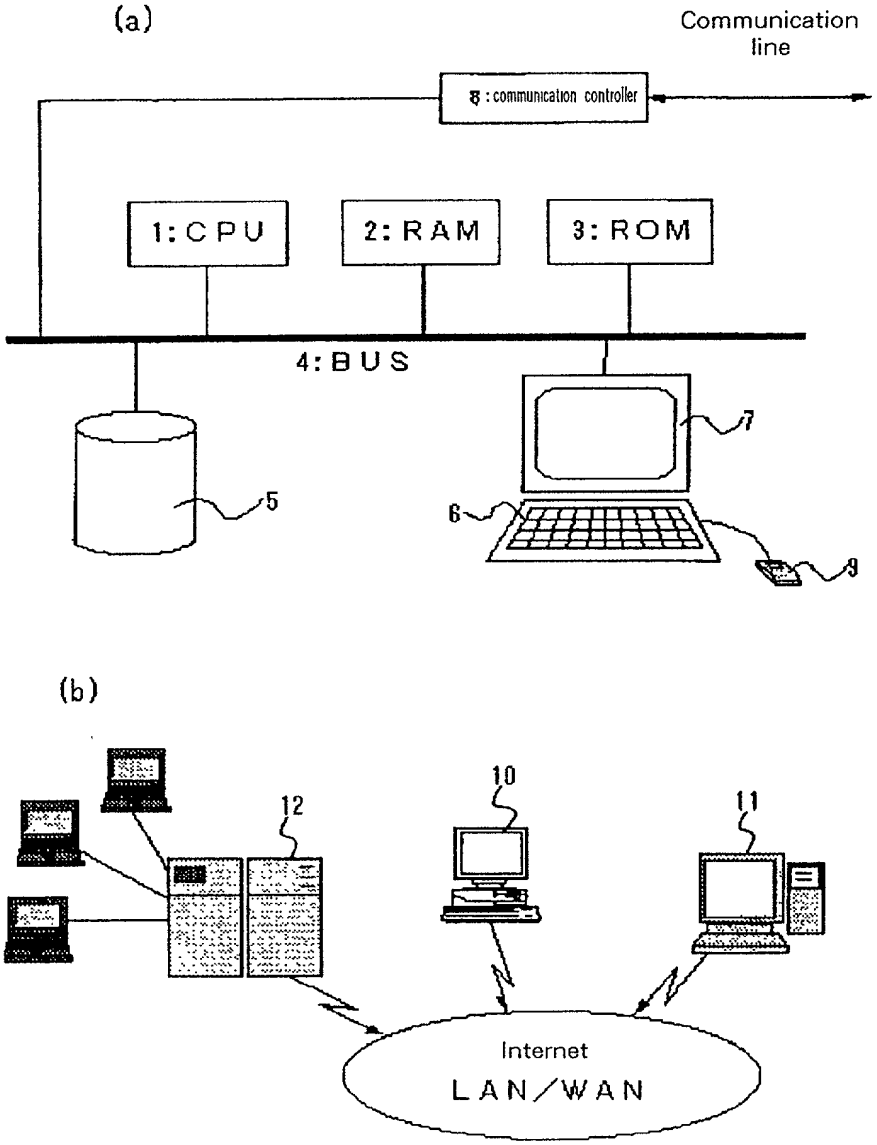
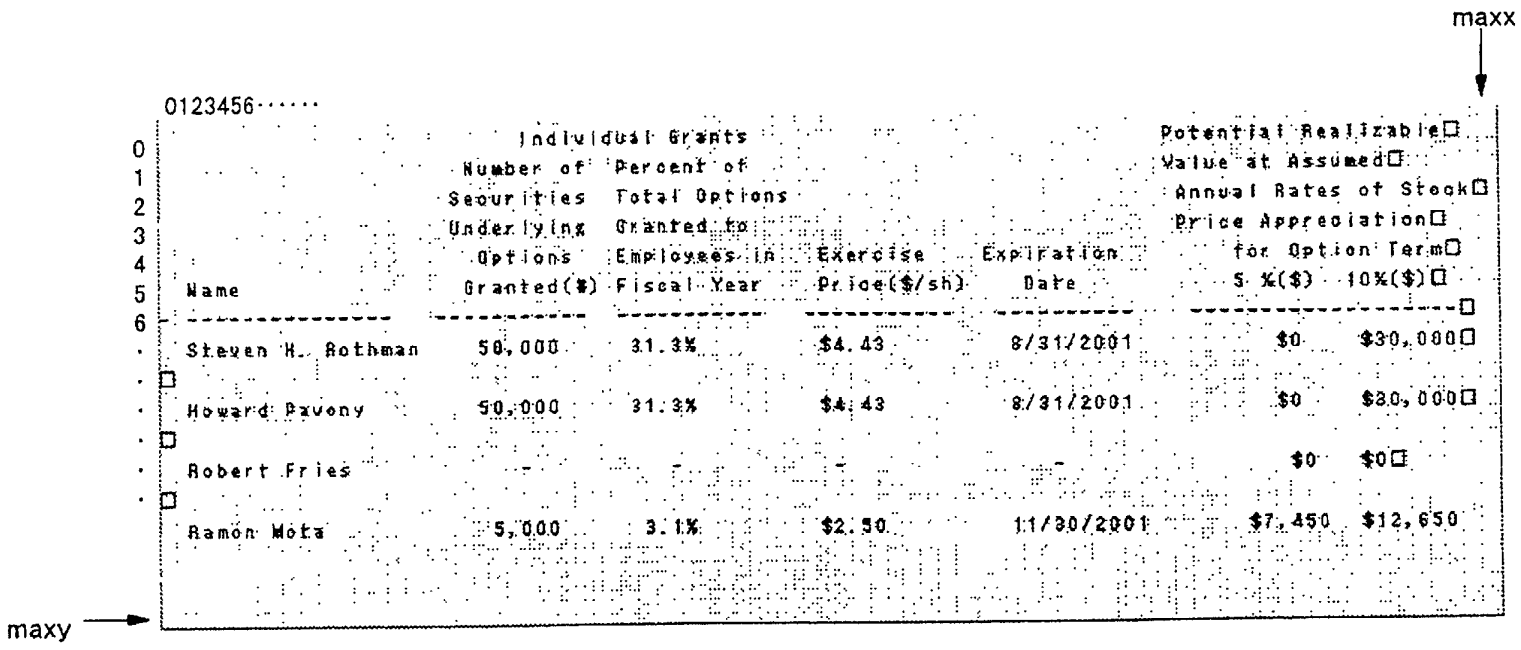
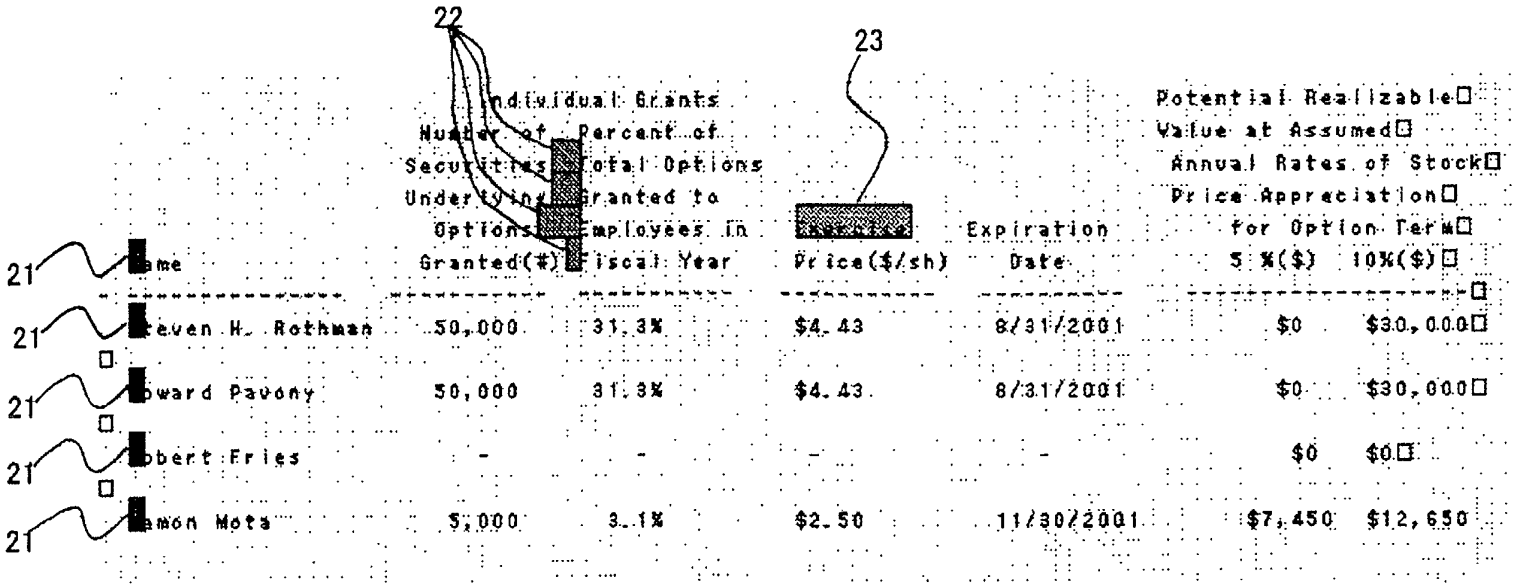

(a)
Communication line
8 : communication controller
1: CPU
2: RAM
3: ROM
4: BUS
5
6
7
9
(b)
10
11
12
Internet
LAN/WAN

Fig. 1



Name	Individual Grants: Number of Securities Underlying Options Granted(#)	Individual Grants: Percent of Total Options Granted to Employees in Fiscal Year	Individual Grants: Exercise Price($/sh)	Individual Grants: Expiration Date	Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Term: 5 %($)	Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Term: 10%($)
Steven H. Rothman	50,000	31.3%	$4.43	8/31/2001	$0	$30,000
Howard Pavony	50,000	31.3%	$4.43	8/31/2001	$0	$30,000
Robert Fries	-	-	-	-	$0	$0
Ramon Mota	5,000	3.1%	$2.50	11/30/2001	$7,450	$12,650

Fig. 2



Name	Individual Grants: Number of Securities Underlying Options Granted(#)	Individual Grants: Percent of Total Options Granted to Employees in Fiscal Year	Exercise Price($/sh)	Expiration Date	Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Term: 5%($)	Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Term: 10%($)
Steven H. Rothman	50,000	31.3%	$4.43	8/31/2001	$0	$30,000
Howard Pavony	50,000	31.3%	$4.43	8/31/2001	$0	$30,000
Robert Fries	-	-	-	-	$0	$0
Ramon Mota	5,000	3.1%	$2.50	11/30/2001	$7,450	$12,650

Fig. 3

24

Name	Individual Grants: Number of Securities Underlying Options Granted(#)	Percent of Total Options Granted to Employees in Fiscal Year	Exercise Price($/sh)	Expiration Date	Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Term 5 %($)	10%($)
Steven H. Rothman	50,000	31.3%	$4.43	8/31/2001	$0	$30,000
Howard Pavony	50,000	31.3%	$4.43	8/31/2001	$0	$30,000
Robert Fries	-	-	-	-	$0	$0
Ramon Mota	5,000	3.1%	$2.50	11/30/2001	$7,450	$12,850

Fig. 4

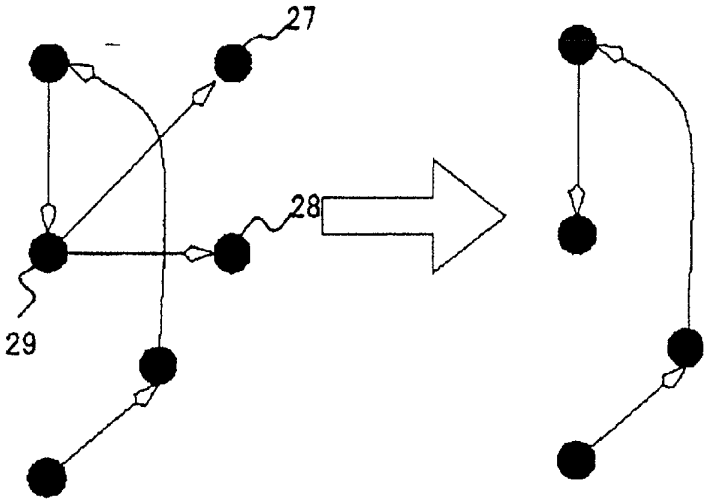


Fig. 6

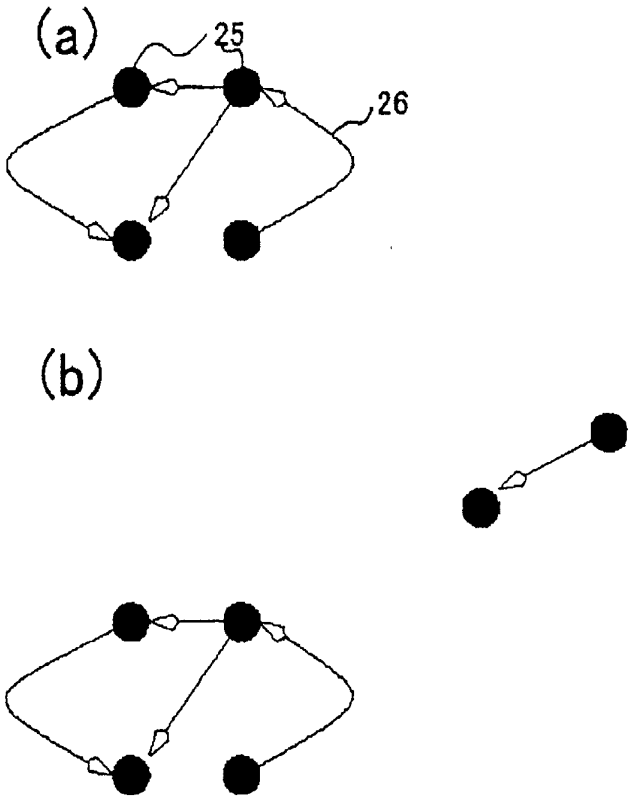
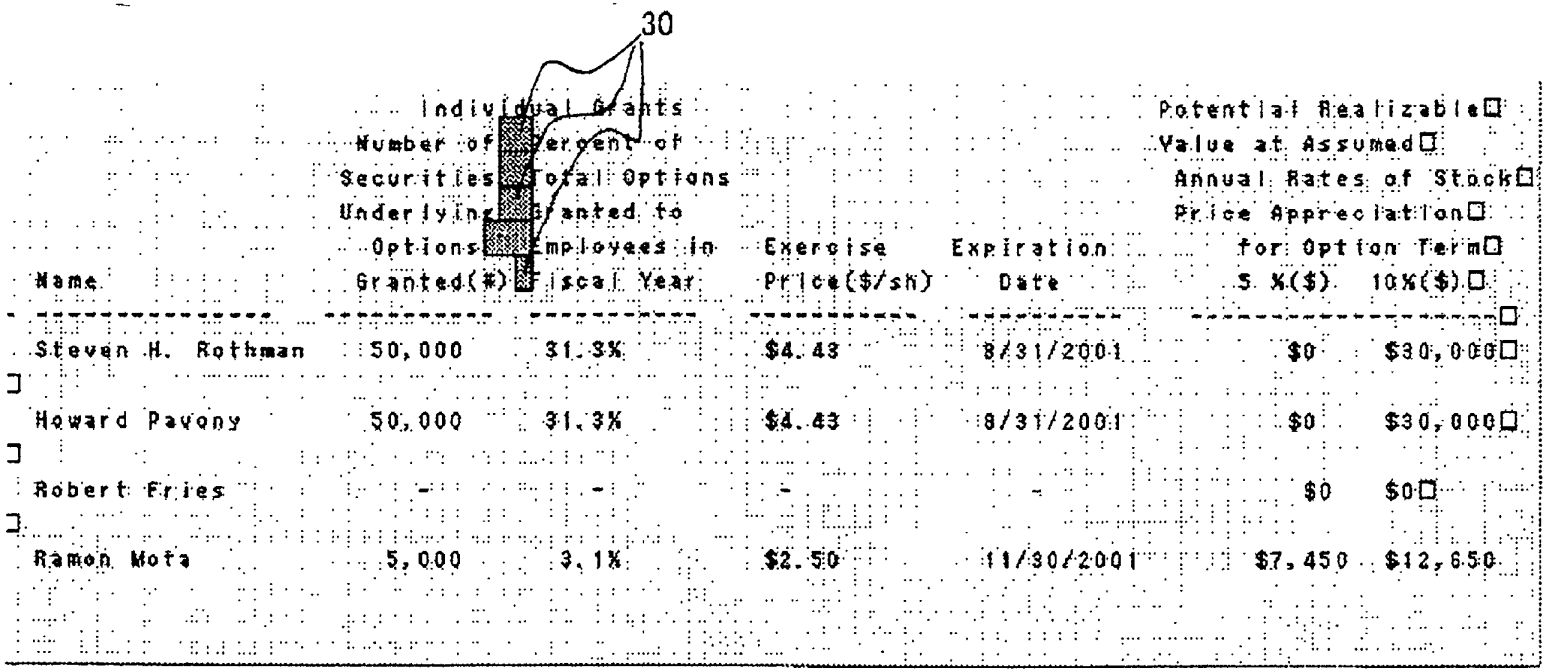


Fig. 5



30

Name	Individual Grants: Number of Securities Underlying Options Granted(#)	Individual Grants: Percent of Total Options Granted to Employees in Fiscal Year	Exercise Price($/sh)	Expiration Date	Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Term: 5 %($)	Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Term: 10%($)
Steven H. Rothman	50,000	31.3%	$4.43	8/31/2001	$0	$30,000
Howard Pavony	50,000	31.3%	$4.43	8/31/2001	$0	$30,000
Robert Fries	-	-	-	-	$0	$0
Ramon Mota	5,000	3.1%	$2.50	11/30/2001	$7,450	$12,650

Fig. 7

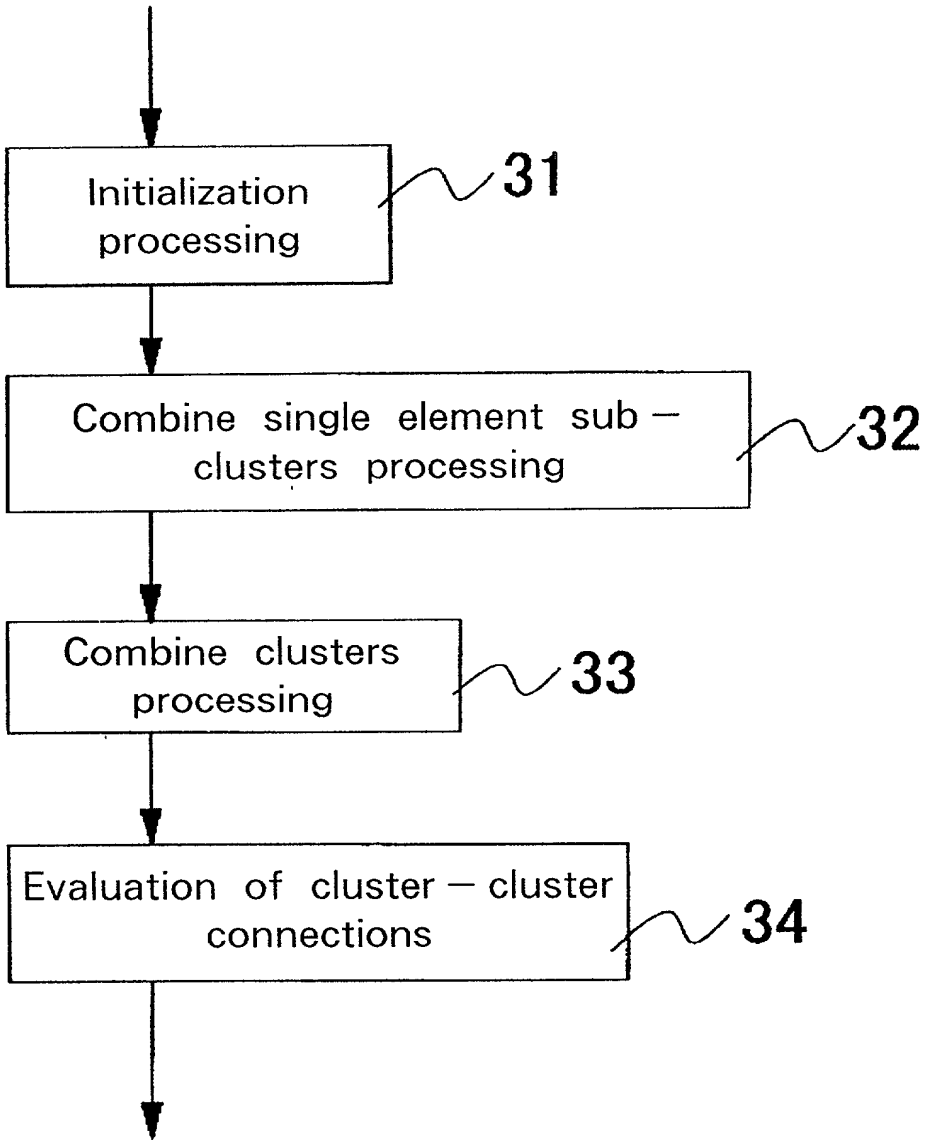

Initialization processing
31
Combine single element sub – clusters processing
32
Combine clusters processing
33
Evaluation of cluster – cluster connections
34

Fig. 8

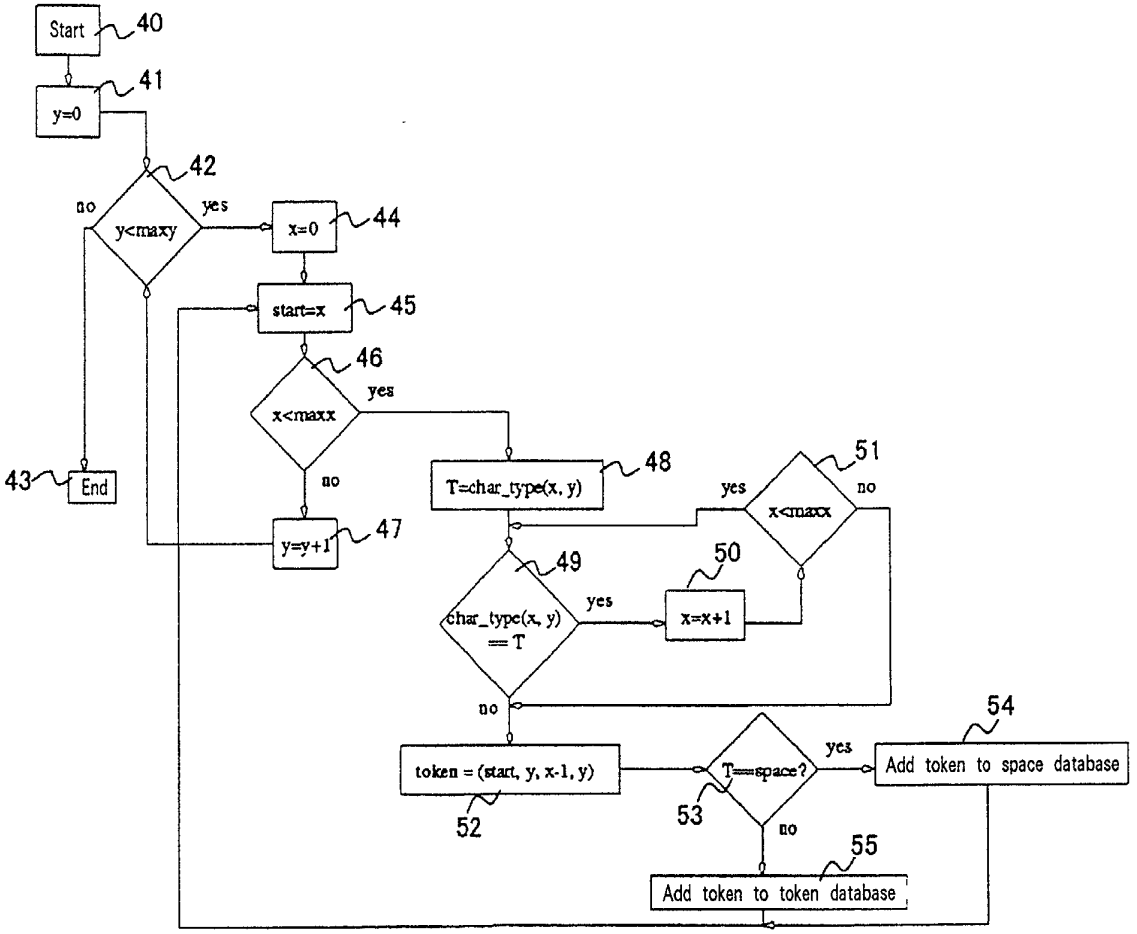

Start
40
y=0
41
42
no
y<maxy
yes
x=0
44
start=x
45
46
x<maxx
yes
no
43
End
y=y+1
47
T=char_type(x, y)
48
yes
51
x<maxx
no
49
char_type(x, y) == T
yes
50
x=x+1
no
54
token = (start, y, x-1, y)
52
T==space?
53
yes
Add token to space database
no
55
Add token to token database

Fig. 9

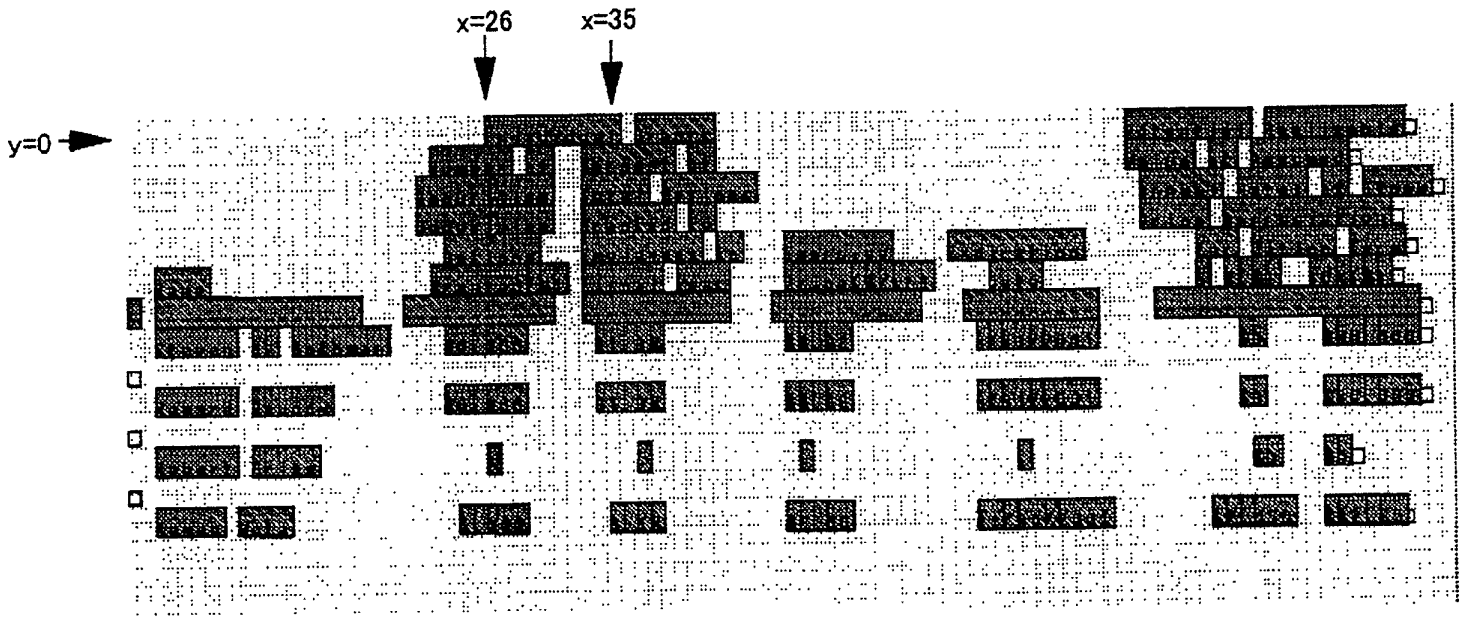


Fig. 10

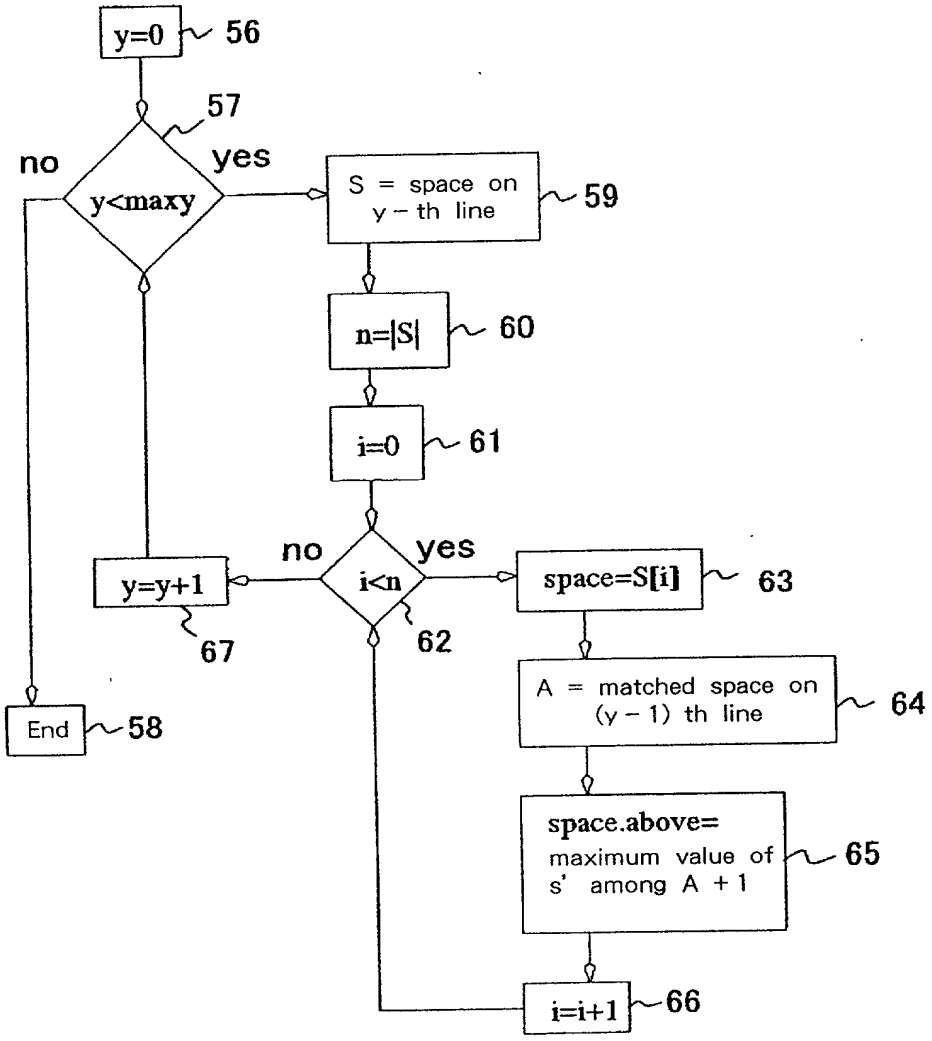

y=0
56
57
no
yes
y<maxy
S = space on y – th line
59
n=|S|
60
i=0
61
no
yes
i<n
62
y=y+1
67
space=S[i]
63
A = matched space on (y – 1) th line
64
space.above= maximum value of s' among A + 1
65
i=i+1
66
End
58

Fig. 11

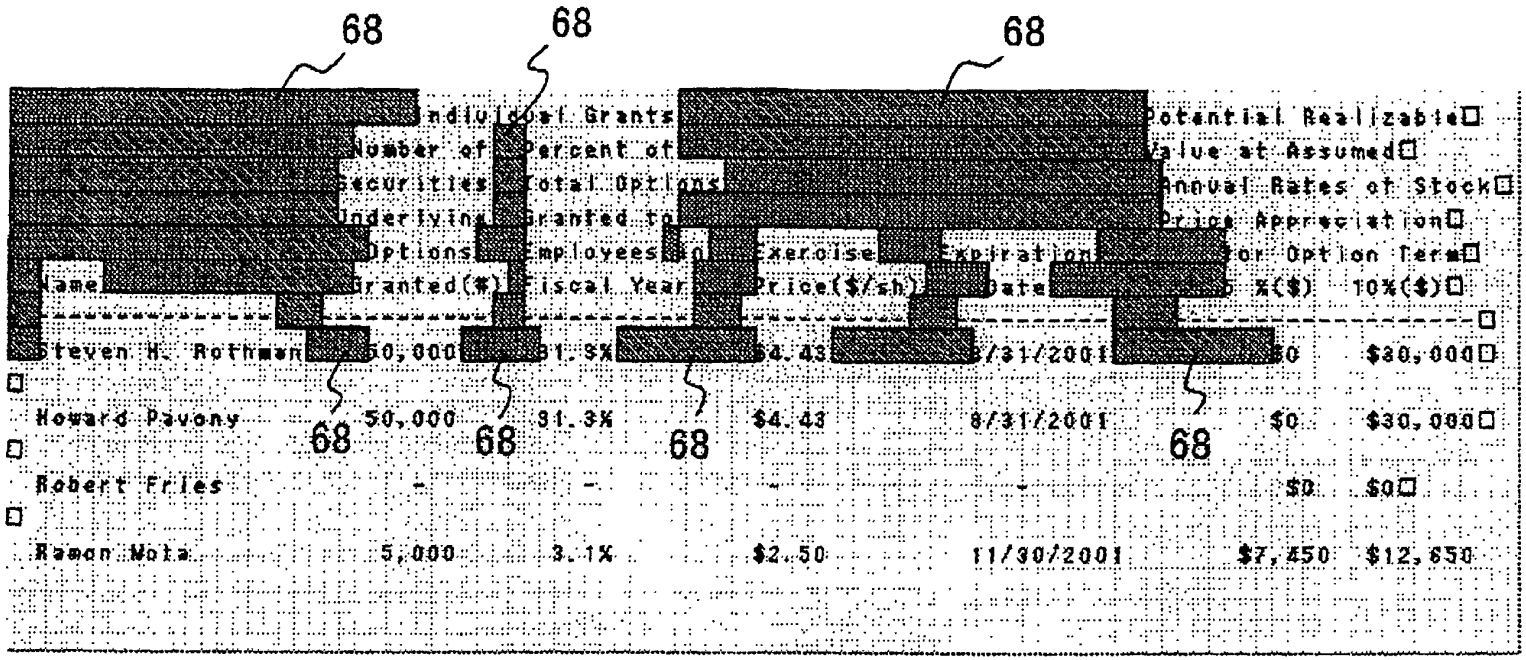

68
68
68
Individual Grants
Number of Securities Underlying Options Granted(#)
Percent of Total Options Granted to Employees in Fiscal Year
Exercise Price($/sh)
Expiration Date
Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Term
5 %($)
10%($)
Steven H. Rothman 50,000 31.3% $4.43 8/31/2001 $0 $30,000
Howard Pavony 50,000 31.3% $4.43 8/31/2001 $0 $30,000
Robert Fries - - - - $0 $0
Ramon Mota 5,000 3.1% $2.50 11/30/2001 $7,450 $12,650
68
68
68
68

Fig. 12

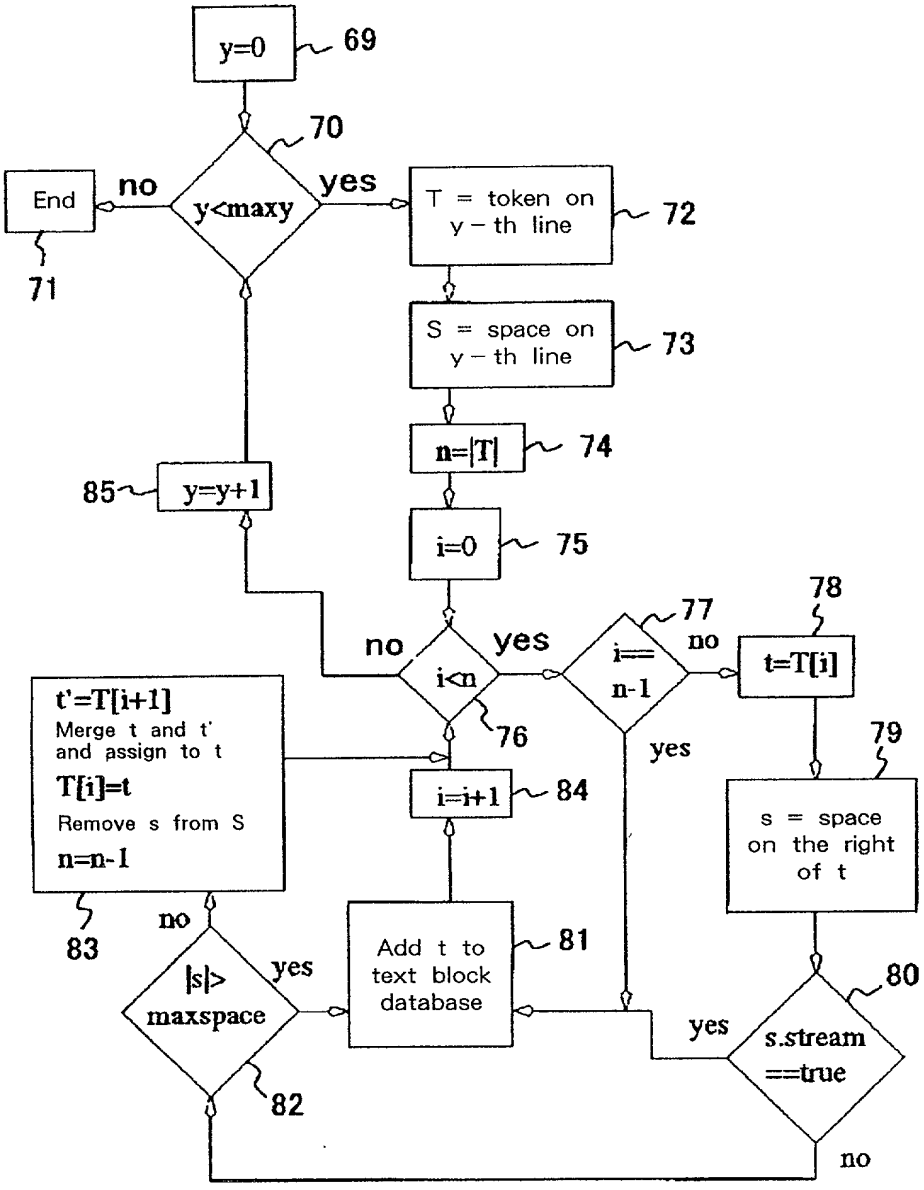

y=0
69
70
End
no
y<maxy
yes
T = token on y – th line
72
71
S = space on y – th line
73
n=|T|
74
85
y=y+1
i=0
75
78
77
no
yes
i==n-1
t=T[i]
no
i<n
76
t'=T[i+1]
Merge t and t' and assign to t
T[i]=t
Remove s from S
n=n-1
yes
79
i=i+1
84
s = space on the right of t
no
83
|s|>maxspace
yes
Add t to text block database
81
80
yes
s.stream ==true
82
no

Fig. 13

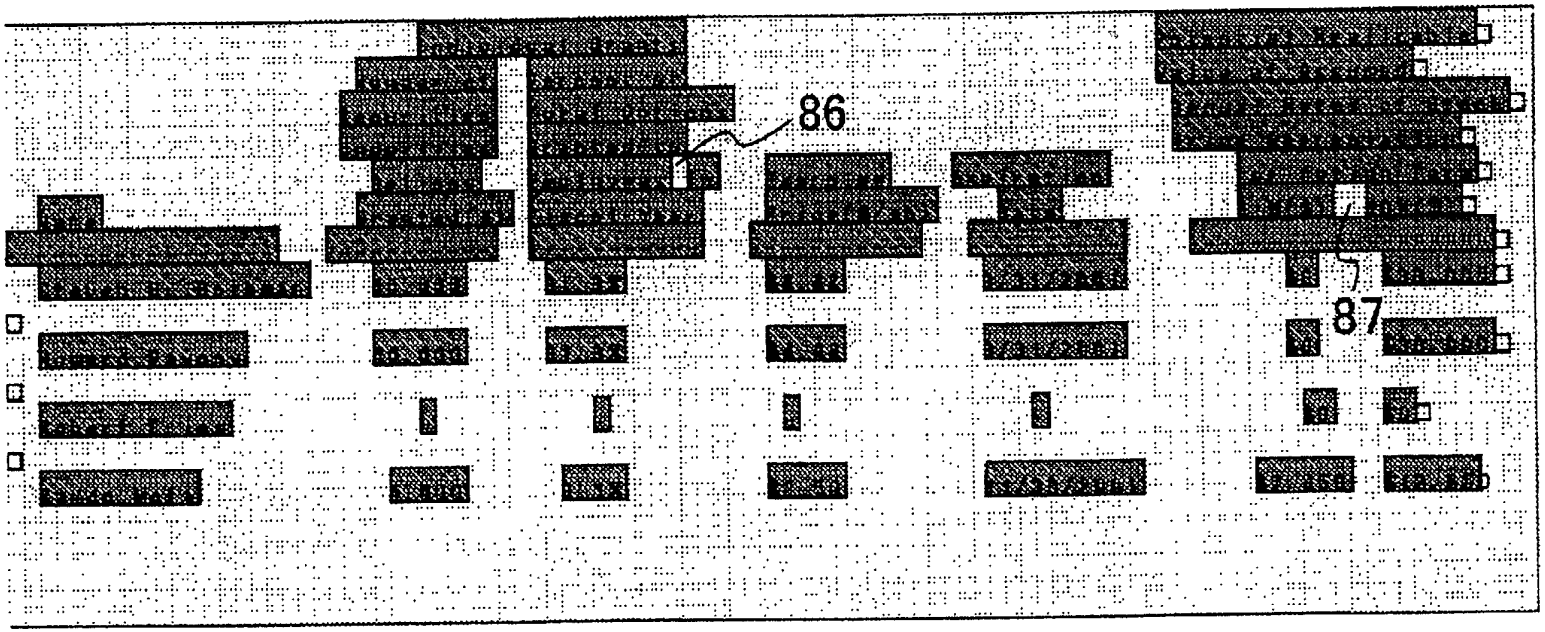


Fig. 14

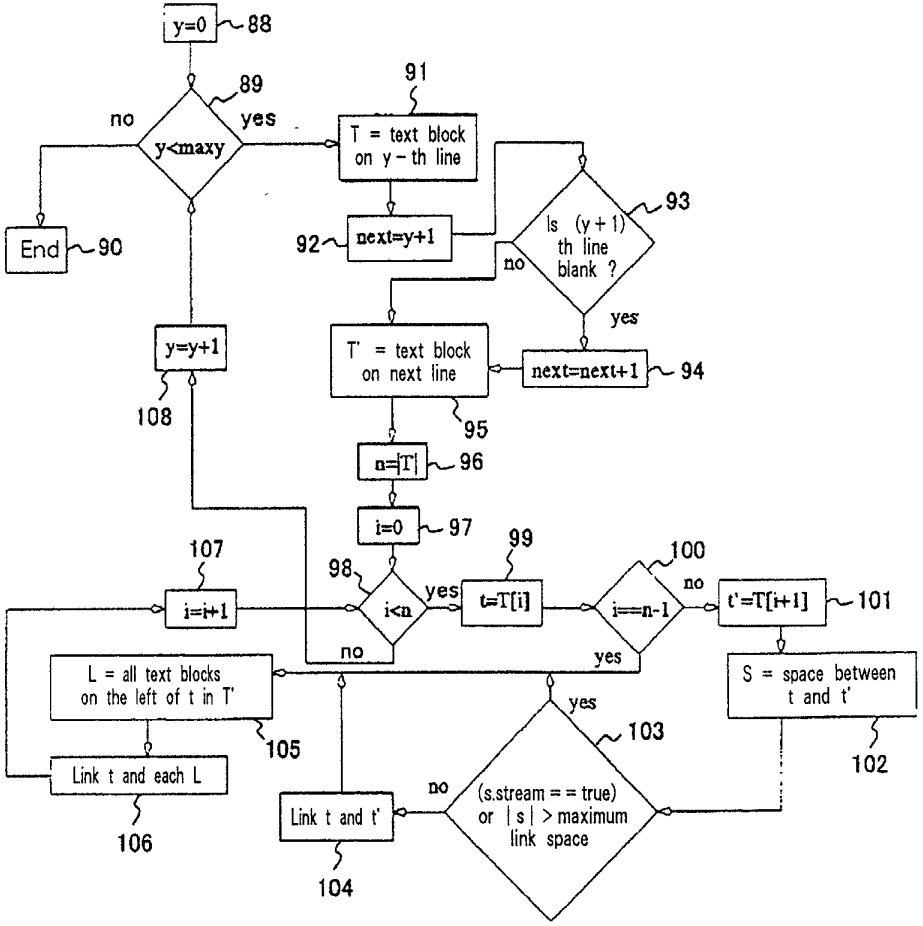

y=0
88
89
no
yes
y<maxy
End
90
91
T = text block on y – th line
92
next=y+1
93
Is (y + 1) th line blank ?
no
yes
y=y+1
108
T' = text block on next line
next=next+1
94
95
n=|T|
96
i=0
97
107
98
99
100
i=i+1
i<n
yes
t=T[i]
i==n-1
no
t'=T[i+1]
101
no
yes
L = all text blocks on the left of t in T'
105
S = space between t and t'
102
yes
103
Link t and each L
106
Link t and t'
104
no
(s.stream = = true) or | s | > maximum link space

Fig. 15

```
1 (tokens, spaces)←tokenize(doc);
2 streams←stream(doc);
3 text_blocks←get_initial_blocks(tokens, spaces, streams);
4 links←get_initial_links(text_blocks);
5 document_graph←(text_blocks, links);
```

Fig. 16

```
1 cluster_set←cluster(doc);
2 for all c∈ cluster_set do {
3     sub_cluster_set←sub-cluster(c);
4     for all s∈ sub_cluster_set do {
5           for all links in s do {
6                 if valid(link) then merge(sink, source);
7           }
8     }
9 }
```

Fig. 17

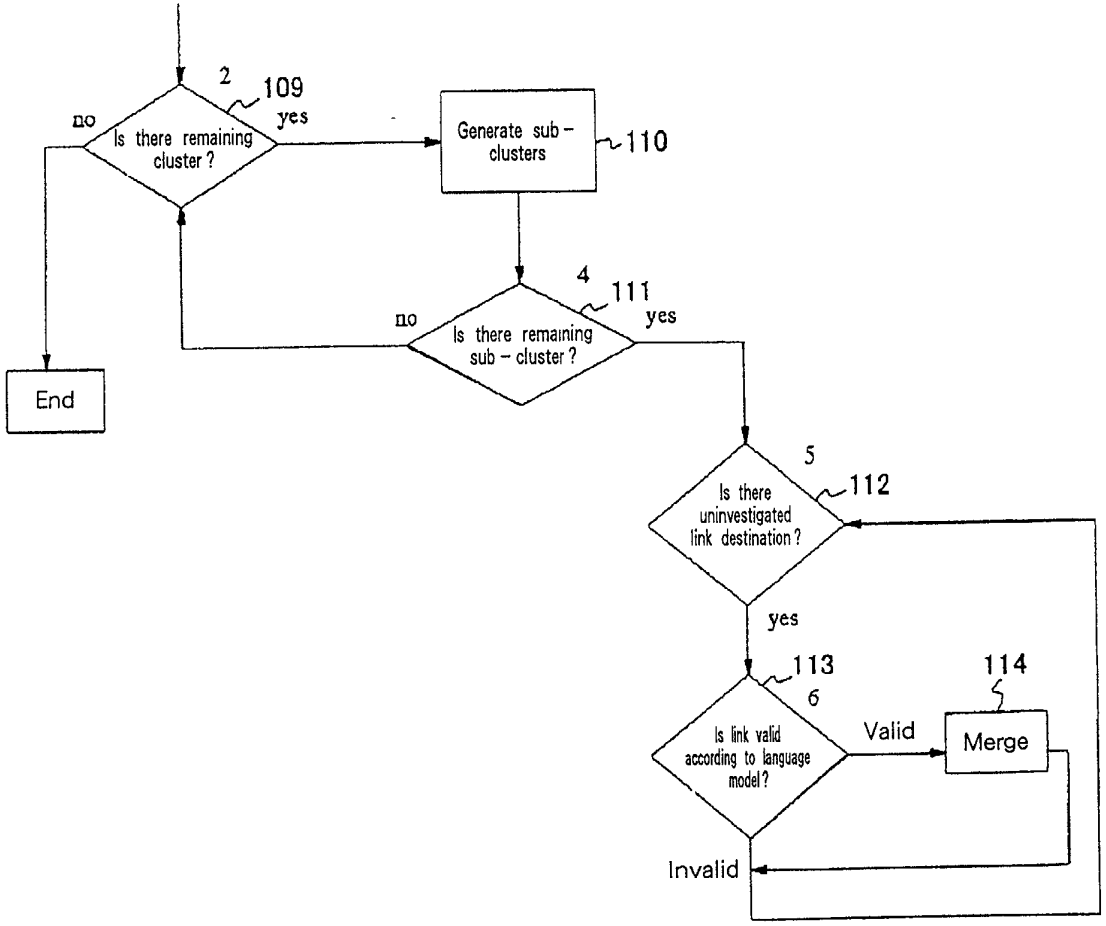

2
109
yes
no
Is there remaining cluster ?
Generate sub – clusters
110
4
111
yes
no
Is there remaining sub – cluster ?
End
5
112
Is there uninvestigated link destination ?
yes
113
6
114
Is link valid according to language model ?
Valid
Merge
Invalid

Fig. 18

```
1 perplexity←3;
2 max_perplexity←get_max_perplexity;
3 while(perplexity<max_perplexity) do {
4     repeat while merges continue to be carried out
5     cluster_set←cluster(doc);
6     for all c∈ cluster_set do {
7          for all links in c do {
8               if(perplexity(link)<perplexity) then do {
9                    if unique_valid_link(link) then merge(sink, source);
10              }
11         }
12    }
13    perplexity←perplexity + 1;
14    max_perplexity←get_max_perplexity;
15}
```

Fig. 19

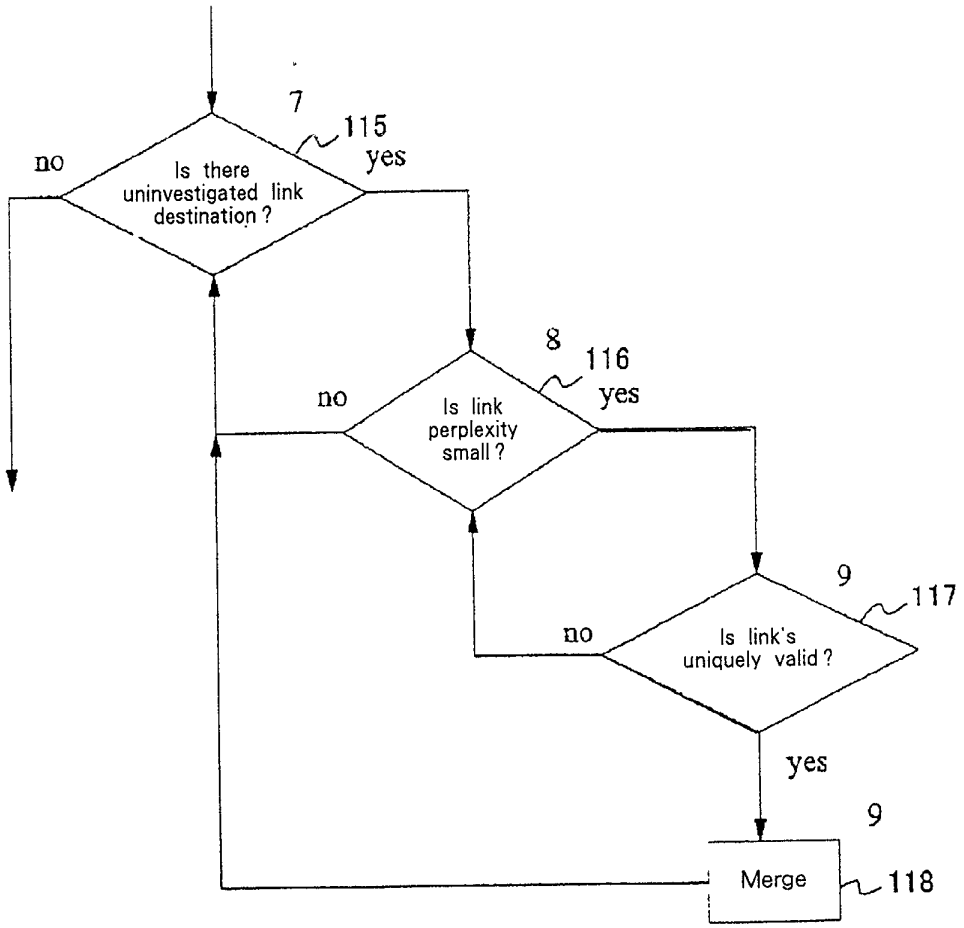

7
115
no
Is there uninvestigated link destination ?
yes
8
116
no
Is link perplexity small ?
yes
9
117
no
Is link's uniquely valid ?
yes
9
Merge
118

Fig. 20

```
1 perplexity←3;
2 max_perplexity←get_max_perplexity;
3 while(perplexity<max_perplexity) do {
4     repeat while merges continue to be carried out
5     cluster_set←cluster(doc);
6     for all c∈ cluster_set do {
7          ordered_links←get_ordered_links(c);
8          for each link ∈ ordered_links do {
9               if perplexity(link)<perplexity then do {
10                   if distinguished_valid_link(link) then merge(sink, source);
11              }
12         }
13    }
14    merge_unary_sub-clusters;
15    perplexity←perplexity + 1;
16    max_perplexity←get_max_perplexity;
17}
```

Fig. 21

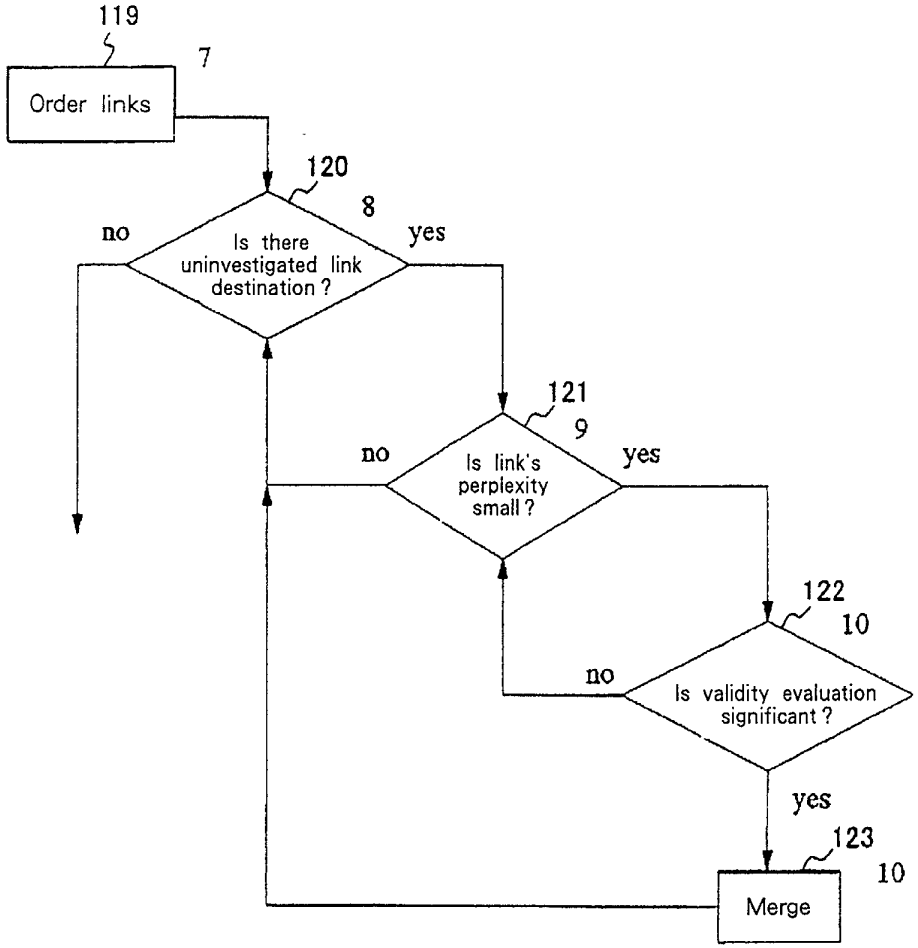

119
7
Order links
120
8
no
Is there uninvestigated link destination ?
yes
121
9
no
Is link's perplexity small ?
yes
122
10
no
Is validity evaluation significant ?
yes
123
10
Merge

Fig. 22

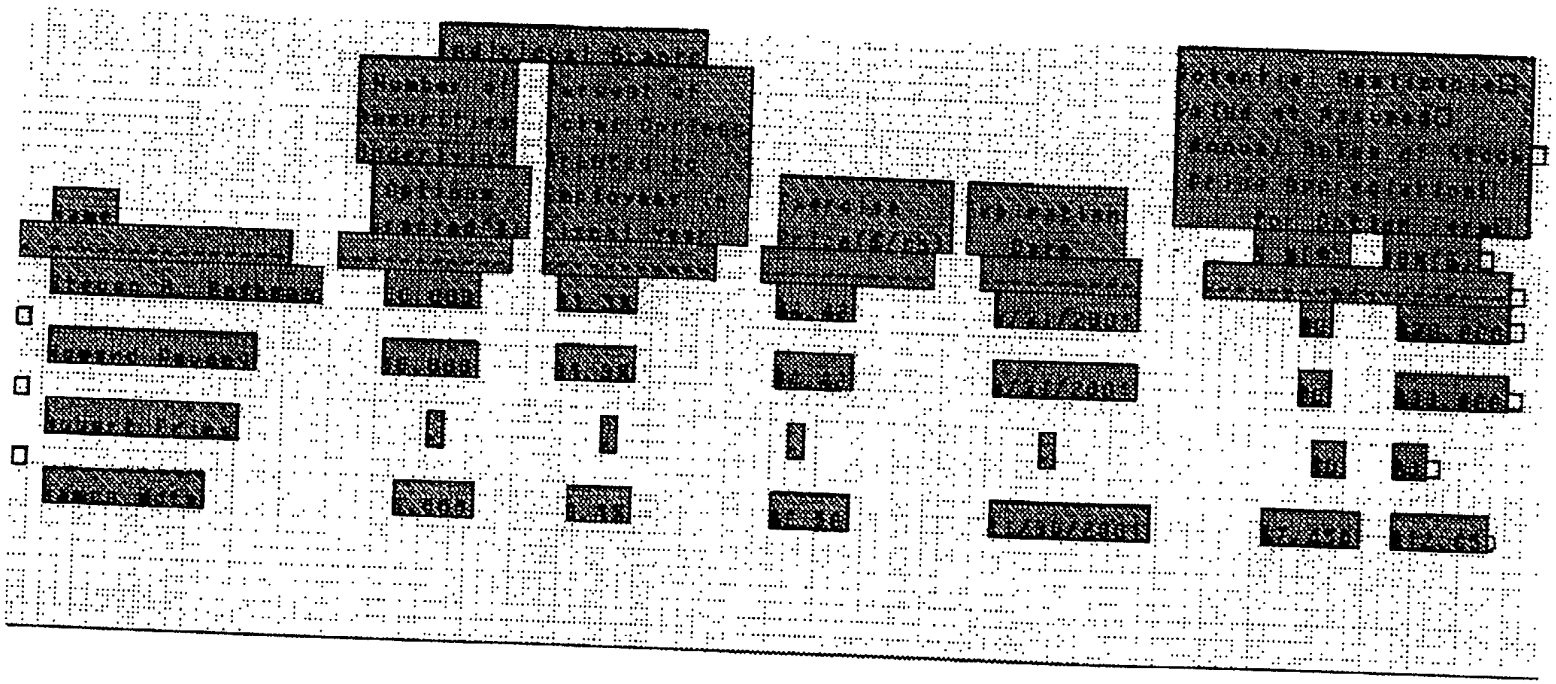


Fig. 23

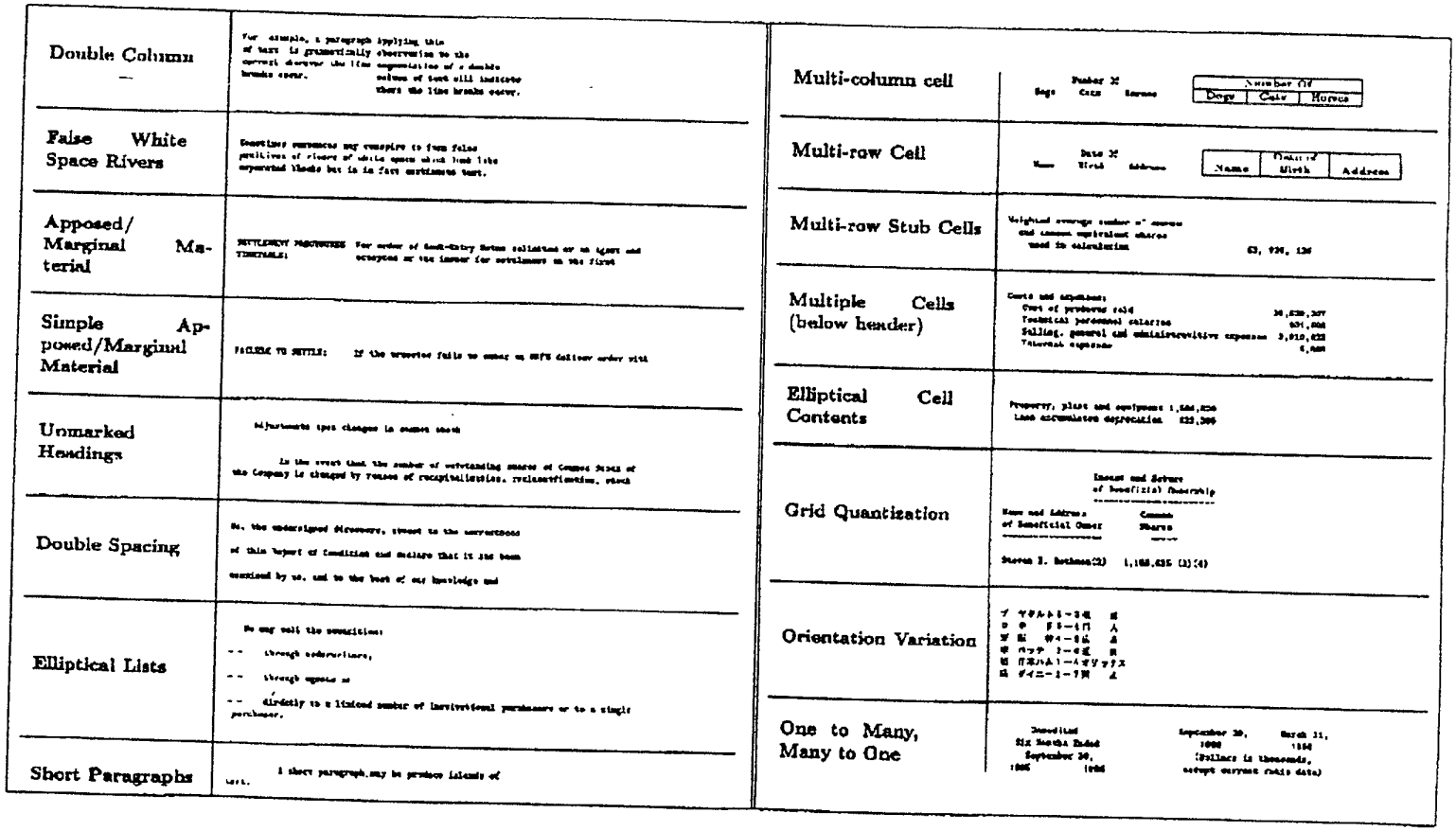

Double Column
False White Space Rivers
Apposed/ Marginal Material
Simple Apposed/Marginal Material
Unmarked Headings
Double Spacing
Elliptical Lists
Short Paragraphs
Multi-column cell
Multi-row Cell
Multi-row Stub Cells
Multiple Cells (below header)
Elliptical Cell Contents
Grid Quantization
Orientation Variation
One to Many, Many to One

Fig. 24